

STATINTL

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Computer/Operations Research Skill Development Program

1. The Agency and the Intelligence Community have experienced considerable difficulty in realizing the benefits which intuitively appear to be potentially available through automatic data processing and other computer applications, and operations research and systems analysis techniques. I feel this situation exists because the more experienced officers who appreciate what is needed and understanding the alternatives which may be used for satisfying the needs are not sufficiently skilled to assess the capabilities (and incapacities) of computer technology and operations research as solutions of these needs. On the other hand, officers who are competent in computer and operations research techniques are generally young, inexperienced, and junior.

2. Again and again experienced seniors and computer/OR educated juniors have been teamed to study and resolve Agency and Community information handling and processing problems with remarkably little success--COINS, CHIVE, etc. After a period of a year or so these teams dissolve--generally with each set of participants mutually frustrated.

3. I believe the lack of results in these team efforts is due to

-2-

the gaps in experience and education of the participants, aggravated further by an inability to communicate in the critical technologies: these gaps cannot be adequately bridged to achieve effective results using this team approach.

4. Although juniors obviously cannot be rapidly "experienced", seniors can quickly acquire a <sup>enough</sup> high level of competence in computer/OR techniques. This has been demonstrated, for example, in Navy and Marine Corps programs. Specifically, I believe that the skills of senior officers can be sufficiently extended through approximately one full year of graduate work (such as that provided within the Center for Technology, American University) to make them personally competent to identify and evaluate ADP applications and effectively communicate to the junior officers and thus lead and guide the implementation of the detailed effort required.

5. Because pressing problems which arise from time to time associated with computer and operation research techniques generally occur in different organizational units of the Agency at different times, the broad needs for the development of skills in these areas by senior personnel may not be readily perceived. Consequently, piecemeal attempts to ameliorate the situation and short management familiarization courses, while useful, do not address the basic problem.

-3-

6. Unlike most commercial, technical, educational, or other organizations, the Agency cannot satisfactorily solve this fundamental problem through hiring or contracting because the Agency's problems tend to be highly specialized both in their nature and in the environment in which they must be solved. Thus computer/OR competent-Agency experienced personnel must be "home grown" for the present time.

7. A wide spectrum of benefits may be achieved by the Agency by exploiting the experience of these senior officers. In its community role these experienced officers, if competent in the critical techniques, could assume leadership in a variety of community activities in order to assure that this work was properly organized and accomplished. If experienced officers cannot provide the leadership which is required, the potential for a succession of unsatisfactory results must be accepted, and considerable delay will be incurred before the benefits which are potentially available may be enjoyed. It is especially important that an internal capability be developed to deal effectively in all activity areas--finance, logistics, communications, intelligence analysis, etc.--with advisory groups such as the recent Knox Panel which may be expected to increase in number in the future. Fundamentally, the Agency will maintain leadership in this vital area through its

*only if the personnel and its subordinates are able to communicate. The Agency could present its case - if individual is Ray S. Johnson*

-4-

capability, not from its position in the community.

8. Within the Agency the variety of improvements which may be anticipated are numerous and only a few need to be enumerated for illustration. The greatest gain may result from increased effectiveness in the implementation of computer/OR techniques because the programs will reflect experienced officers' leadership. These programs will be more efficient because they will have been better defined. A major increase in efficiency may also be anticipated because of the improved ability to communicate throughout the Agency in these areas. For example, contract, finance, legal and other officers have fundamental interest in data associated with external contracts, and the ability of the officers with these concerns to state their information system requirements will be greatly enhanced. Benefits in other areas such as in file organization and structure which are critical to information retrieval can be anticipated -- again due to the increased skill and understanding with which senior officers can define the needs in terms which are comprehensible to the computer programmers.

9. Personal benefits are not restricted to those who participate in such a program as senior officers. The very existence of this activity will encourage junior officers to remain with the Agency if they perceive a progressive rather than stultifying attitude towards

*would not expect senior officers to communicate directly with programmers.*

*Why the direct focus on support type applications. May be a fault with their basic management training with High ADP/OK*

-5-

modern techniques. Further, and perhaps more importantly, the communications between the junior and senior officers will be improved. Although it is difficult to estimate with precision, it is clear that junior officers experienced in computer technology and operations research have been leaving the Agency due in part to a feeling that effective applications of their skills cannot be made and will not be appreciated through the senior officers with whom they deal.

*Computer technicians  
leave to go to  
their own profession  
By and large I don't  
think they are  
particularly  
interested in  
crossing over to  
become the senior  
operating managers  
of the Agency!*

10. For senior officers the new skills which they acquire will provide an opportunity for them to make an especially significant contribution to the Agency in their pre-retirement period by fully utilizing the experience they have acquired through the years. Extraordinary productivity may result in these last few career years because the conditions and circumstances will tend to reduce the parochialism which often complicates many problems. Undoubtedly the participating senior officers will be highly motivated because of the outstanding opportunity presented to the participants to equip themselves for a post-Agency career.

*It may be good  
to train people  
for career, but  
not going  
into the  
primary career.*

*I wonder  
what foundation  
there is for this  
and how solid  
it may be.*

11. To be successful, several factors seem to be of particular importance to the proposed program. First of all, there must be enough participants throughout the Agency to have an immediate and widespread effect--perhaps 30 - 50 officers. These officers should

*This represents a substantial investment of manpower and funds. If these people are really as valuable as they are represented to be, they can well afford to give 25-33% of their remaining time to training?*

have 3 - 5 years remaining (but no more than 3 - 5 years) before retirement. This follows in part from the proposition that it is the senior officers whose needs are greatest in these skill areas. Incidentally, the Army Electronics Command recently had a program to provide training of the type discussed here to their junior officers. The results were not particularly gratifying since many of those who received the training promptly left the Army to obtain better jobs. In some cases it was advantageous for the officer to refund the cost of the training to the Army. On the other hand, the Navy has had a program designed for senior officers (Commanders and above, I believe, plus civilian equivalents) and the attrition has been negligible so that the skill improvement has been retained within the organization.

12. Selection for this training program by a special board including not only representatives from the Office of Personnel, OTR but also representatives from the American University and the Agency Evaluation Staff is recommended. The officers should attend the regular on-campus courses in order to broaden their perspective as much as possible.

*I wonder how close Ray is to retirement.*

*disagree completely  
It would be interesting to know more about these programs*